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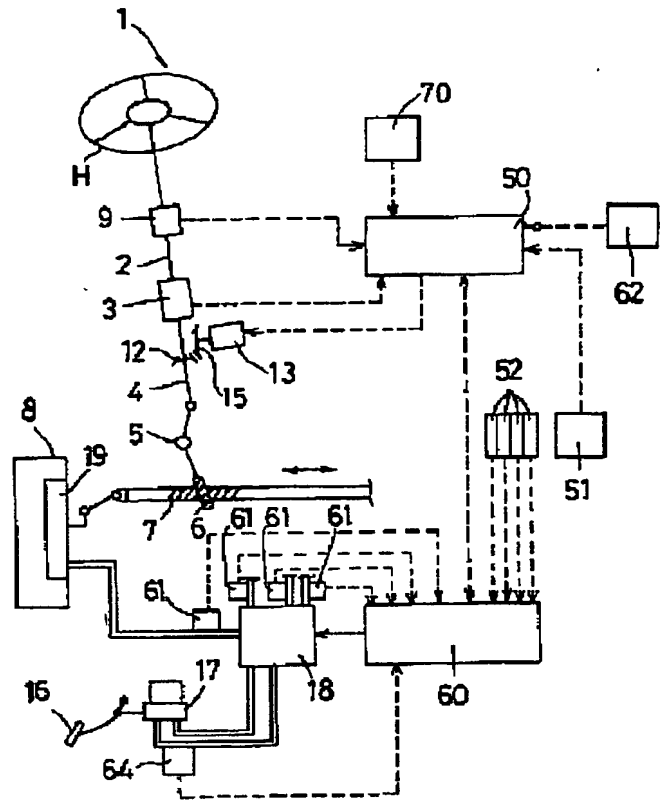
APPLICATION DATE : 21-11-97
APPLICATION NUMBER : 09337694

APPLICANT : KOYO SEIKO CO LTD;

INVENTOR : NISHIZAKI KATSUTOSHI;

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TITLE : STEERING DEVICE OF VEHICLE



ABSTRACT : PROBLEM TO BE SOLVED: To solve the limitation of stabilization and control of vehicle behavior in prevention of instability of vehicle behavior in steering by outputting both control signals of the force required for steering and the vehicle braking force according to the steering dependency corresponding to the priority of steering to braking operation in a course change of vehicle.

SOLUTION: As the variable having an influence on unstable vehicle behavior in steering, vehicle speed and steering torque are determined by a vehicle speed sensor 51 and a torque sensor 3, respectively, and steering angle change speed is also determined by a steering system controller 50 from the steering angle by a steering sensor 9. Further, rotating speed of each wheel 8 and friction coefficient between vehicle and road surface are determined by a wheel speed sensor 52 and a friction coefficient sensor 62, respectively. The controller 50 stores the relation between the variable and the necessity of prevention of instability of vehicle behavior, and judges the presence of the necessity of instability prevention from the determined variable before the vehicle behavior becomes unstable, and stores and controls the relation among the variable, the steering dependency, the force required for steering, and the braking force. Thus, the vehicle behavior can be stabilized by a driver's own steering.

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Method and apparatus for operating a steering system for a motor vehicle

Patent Number: ☐ US6085860
 Publication date: 2000-07-11
 Inventor(s): HACKL MATTHIAS (DE); KRAEMER WOLFGANG (DE)
 Applicant(s): BOSCH GMBH ROBERT (DE)
 Requested Patent: ☐ DE19751227
 Application Number: US19980045438 19980320
 Priority Number(s): DE19971012165 19970322; DE19971051227 19971119
 IPC Classification: B62D5/04
 EC Classification: B62D6/04
 Equivalents: ☐ FR2761039, ☐ JP10329746

Abstract

A steering system for a motor vehicle with at least one steerable wheel, one actuator, and one auxiliary drive. The auxiliary drive superimposes the steer motion initiated by the driver of the vehicle and the motion initiated by the actuator to generate the steering motion of the steerable wheel. A yaw parameter representing the yawing motion of the vehicle is detected, and a control signal is calculated when a predetermined running condition prevails, dependent at least on the detected yaw parameter. The actuator is then controlled by the generated control signal to initiate the motion. A braking parameter representing the braking condition of the vehicle is also detected, and the existence of the running condition is determined dependent on this detected braking parameter whereby yaw behavior is improved. Active steering intervention is switched in only when an external disturbance of vehicle motion is detected.

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Vehicle steering system

Patent Number: ☐ [US6095277](#)
 Publication date: 2000-08-01
 Inventor(s): BOHNER HUBERT (DE); MOSER MARTIN (DE)
 Applicant(s): DAIMLER CHRYSLER AG (DE)
 Requested Patent: ☐ [DE19650475](#)
 Application Number: US19970985963 19971205
 Priority Number(s): DE19961050475 19961205
 IPC Classification: B62D5/06
 EC Classification: [B62D5/04](#), [B62D5/06](#), [B62D6/00](#)
 Equivalents: ☐ [FR2756799](#), ☐ [GB2320003](#), IT1297095, ITRM970748, ☐ [JP10226353](#), JP3008090B2

Abstract

A vehicle steering system that senses forces acting upon steered vehicle wheels to enable a control device to record introductions of disturbance variables from the road through the steered vehicle wheels without any time delay, and examine its plausibility by means of other input quantities. This permits a multi-redundant system, where the redundant signals or the redundant information determined from the signals originate from differently structured and arranged sensors. There is also the advantageous possibility that, as a function of forces active on the steered vehicles wheels, the control device controls or influences a manual force actuator without delay. This has the purpose of simulating or modulating, as a function of the respective driving conditions, an actuating force on the manual steering device or on the manual steering wheel which can be felt by the driver.

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